

Application Serial No. 10/520,516
Docket No. 7390/84218
Page 8

REMARKS

Applicants courteously solicit favorable reconsideration and a Notice of Allowance.

Claims 1-24 and 26-34 are presented for examination. Claims 1-17 and 19 are withdrawn; claim 25 is cancelled. Claims 18, 23, and 26-28 are amended. The amendments, which raise no new matter or issues, find support throughout the application as filed, and entry thereof is respectfully requested. The total number of claims has actually contracted upon cancelling claim 25. Accordingly, entry of the present Amendment for purposes of reducing the total number of claims and simplifying the issues for appeal is believed to be appropriate.

Applicants courteously solicit rejoinder of the non-elected claims. However, if the currently elected claims are deemed allowable; and, if rejoinder is not granted, Applicants alternatively authorize the cancellation of the non-elected claims by way of Examiner's Amendment in order to pass the application to issue.

Applicants respectfully traverse the rejections under 35 U.S.C. § 103(a) of claims 18, 20-31, 33, and 34 as being obvious over JP 03-048499A in view of Carlson (U.S. 4, 674,888) and of claim 32 as being obvious over the combination of JP '499 and Carlson in view of JP 2001-293343.

Applicants respectfully submit that the references would not have been combined, but even if they were, the claimed inventions would not have been suggested to a person of only ordinary skill in the art.

According to an aspect of the invention as claimed, the method for producing carbonated water comprises supplying water and carbon dioxide gas to a first carbon dioxide gas dissolver, and then an output from such first dissolver can be fed (supplied) to a second carbon dioxide gas dissolver. The second dissolver is in line, such in a pipeline from the first carbon dioxide gas dissolver. Any

Application Serial No. 10/520,516
Docket No. 7390/84218
Page 9

gas that may separate out from the liquid discharged from the first dissolver is dissolved in the second dissolver and thus does not escape to the outside environment (outside air, etc.). Consequently, carbonated water with less variation in concentration is obtainable, which is consistent with a pre-determined concentration selection.

The primary reference does not include a secondary dissolver in the form of a static mixer downstream of a membrane contactor. In view of this and other shortcomings, the primary reference would remain deficient even if it were combined, which is not conceded, with the secondary reference, Carlson.

For instance, in the Carlson reference, the mixing methodology is illustrated by FIG. 1. In Carlson's FIG. 1, tubular supplying element 3 has a number of micropores 6 that are disposed at the edge portion of the liquid supplying side within tubular conduit 2 of a mixer in order to be normal (perpendicular) to the axis line of tubular conduit 2. Although somewhat crudely stated, in Carlson the gas supplied to tubular supplying element 3 is disbursed in a foam from micropores 6 and is mixed with the liquid supplied to the edge portion of the liquid supply side of tubular conduit 2 of the mixer. Afterwards, it is mixed by the plurality of mixing elements 7, 9, 11 and 13 of the mixer. Indeed, Carlson's disclosed paper bleaching process (column 3, line 3 et. seq.) would not have commended itself as suitable for the presently claimed method. It does not show a multi-stage process in which output from a first carbon dioxide gas dissolver is in line (such as in a pipeline) with the input to a second carbon dioxide gas dissolver. In short, the Carlson methodology would not have led, directed, suggested, taught, or the like a person of ordinary skill in the art to Applicants' method according to claims 18, 20-24, 26-31, 33, or 34.

Application Serial No. 10/520,516
Docket No. 7390/84218
Page 10

Further to the Carlson reference, it appears from the present Office Action that Carlson is construed as having a microgas injector that is alleged to correspond to a first carbon dioxide gas dissolver 7 in the present application.

To the extent the above point underlies the current rejection, Applicants respectfully submit that element 3 of Carlson is used just as means for injecting the microgas into the fluid which flows inside the single conduit and for mixing, and the fluid mixed inside the conduit is further mixed by the static mixer within the same conduit. Therefore, Carlson is largely different from claim 18 of this application in that the first step of gas desolation is done efficiently and evenly in the first carbon dioxide dissolver 7, which is independently provided and includes a membrane module enabling the sufficient dissolution of gas by itself, after which the second step of dissolution of gas is done independently in the second gas dissolver in line with the first gas dissolver. The second gas dissolver includes the static mixer 1, which excels in mechanic mixing.

It should be evident that in Carlson, the fluid never flows in the inside of element 3. Element 3 of Carlson, which is the microgas injector, is used in such a manner that gas supplied from outside the gas mixing device is injected into the inside of the conduit 2 through the micropores of unit of micro of the element 3. Meanwhile, in the inside of the conduit (tube) 2, the fluid such as pulp stock is introduced in one direction from outside. Therefore, gas is supplied into the element 3, and the microgas injected through its micropores is injected into the inside of the conduit (tube) 2, in which the fluid flows, so that the fluid and gas are mixed.

Applicants respectfully request favorable reconsideration of the rejection of claim 32. Applicants courteously submit claim 32 defines an unobvious invention over JP '499 over Carlson when taken in further view of JP 2001-293343. In addition to the preceding comments regarding the other references, attention is directed to FIG. 1 of JP '343, wherein reference numeral 3 designates a flow sensor, but not the

CENTRAL FAX CENTER**Application Serial No. 10/520,516****Docket No. 7390/84218****APR 07 2008****Page 11**

flow switch postulated in the Office Action. Accordingly, it is requested the rejection be withdrawn since reference numeral 3 of JP '343 is not the feature relied on the Office Action.

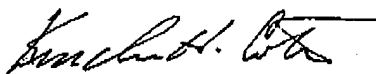
In view of the foregoing, it is respectfully submitted that all pending claims are allowable over the art of record. Reconsideration and withdrawal of the outstanding rejections are respectfully requested.

Applicants hereby request a one-month extension of time in which to file this reply and hereby authorize the Commissioner to charge the \$120 one-month extension fee to Deposit Account 06-1135. The Commissioner is further authorized to charge any required fees not otherwise provided for, including application processing, extension, and extra claims fees, to said Deposit Account.

Respectfully submitted,

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